
ADSC/WSDOT Team Members

January 17th, 2006

Members In Attendance

Name	Company	Telephone	E-mail
Allen Tony	WSDOT	360-709-5450	allent@wsdot.wa.gov
Bauer Mike	WSDOT	360-705-7190	bauerm@wsdot.wa.gov
Carnevale Bob	DBM	253-838-1402	rcarnevale@dbmcm.com
Cuthbertson Jim	WSDOT	360-709-5452	cuthbej@wsdot.wa.gov
Etheridge Mark	DMI	360-518-6893	mark@dmidrilling.com
Gaines Mark	WSDOT	360-705-7827	gainesm@wsdot.wa.gov
Grieder Jeff	Malcolm Drilling	253-395-3300	jgrieder@malcolmdrilling.com
Macnab Alan	CJA	206-575-8248	amacnab@condon-johnson.com
Nicholas, Cathy	FHWA	360-753-9412	Cathy.nicholas@fhwa.dot.gov
Sheikhizadeh Mo	WSDOT	360-705-7828	sheikhm@wsdot.wa.gov
Swett, Geoff	WSDOT	360-705-7157	swettg@wsdot.wa.gov

The meeting began at 8:30 AM. Mo had a letter for ADSC formally requesting the members to provide equipment rental rates for drilling equipment. Members are welcome to update any previously submitted rates.

1. Review of Previous Meeting Minutes

Regarding Item 2 (Constructability Review), Alan Macnab pointed out that ADSC has not recommended a hybrid system. It was agreed to strike the last sentence of the third paragraph.

Alan has not gotten formal comments in yet. However, Bridge has already proceeded with design based on comments provided during the previous meeting. It is not necessary for ADSC to provide formal comments.

On Item 3D, Mike Bauer explained that Item 7 of the drilled shaft submittal already requires an explanation of how the cage will be supported. It is not necessary to re-incorporate Item 8. The previous meeting minutes will be modified accordingly.

Action Plan:

- No action needed.

2. Action Item Update

A. PGA Alternate Side Pocket Design

Mo has not yet heard back from Bridge and Structures. This will be kept as an open item for the next meeting.

Action Plan:

- Mo to provide Bridge and Structures comments on side pockets.

B. Proposed Soldier Pile Concrete Mixes

The latest Specification for backfilling soldier pile shafts was passed out and reviewed by the Team. This revised Specification requires a pumpable mix with a minimum compressive strength of 100 psi when piles are being installed below the water table. Criteria have also been added to describe when lagging can be installed.

For the lagging installation criteria, both Mark Etheridge and Jeff Grieder suggested that the word 'soft' be replaced with 'unconsolidated'. The Team agreed with the suggestion. There was also discussion about the maximum compressive strength limit of 275 psi. The Team agreed to leave this requirement.

Action Plan:

- Mike Bauer will change the word 'soft' to 'unconsolidated'.

C. Criteria for Soldier Pile Temporary Construction Loading in Design

Jim hasn't looked at this yet. A discussion was opened up with ADSC to determine what types of construction loading could be expected at the top of the wall. The ADSC members generally agreed that a loading of 200-250 psf would be typical.

Jeff recommended putting a note on the plans that gives the design basis for construction loading (200-250 psf). The note would require calculations from the Contractor if larger loads will be applied. The Team agreed with this approach. Jim will include this information in future Geotechnical Reports.

Action Plan:

- No further action needed.

D. Noise Wall/Sign Bridge Shaft Prequalification

Jim Spaid is still working on this issue. The AGC Members didn't have strong feelings about this issue. However, Jim also wants to include electrical contractors in the discussion. In the past, electrical contractors have often done their own drilling. Jim Spaid is hoping for an August 2006 implementation.

Jim Cuthbertson pointed out that we will need to modify the Construction Manual if this change is made. It was suggested that submittals be sent through John Olk to Geotech. Mo and Jim agreed with this suggestion.

Action Plan:

- Mo to provide update at next meeting.

D. Shaft Installation Submittal Changes

This item was already corrected during review of the previous meeting minutes.

Action Plan:

- No action needed.

E. Adverse Effects of Shaft Construction Time on Capacity

Alan passed out copies of the Power Point presentation given by Dr. Crapps. Although Alan understands the concern, he does not believe that Dr. Crapps has differentiated between slurry buildup and soil relaxation. Tony suggested freshening up (augering) the shaft walls when shafts are open for an extended duration. Alan expressed concern because this will provide only questionable benefits and it may make it difficult to meet the shaft construction tolerances.

Action Plan:

- Mo to keep this on the agenda in case further discussion is necessary.

F. Effects of Bentonite Slurry on Shaft Axial Capacity

Bentonite slurry has already been removed from the Specifications. The ADSC Members expressed concern about removing this as an option for drilled shaft construction. The State agreed to allow use of Mineral Slurries provided that, for shafts open more than two days, the sides of the shaft will be cleaned to remove any slurry build-up.

Action Plan:

- Mike to modify the Specification to include mineral slurry and to add language to require cleaning of the sides when the shaft is open for more than two days.

G. Letter to National ADSC

Mo will work on this letter during his time in Reno.

Action Plan:

- Mo to provide update at next meeting.

New Business

3. Review of Shotcrete Testing Requirements

Bob Carnevale asked if it would be possible to accept shotcrete based on historical strength rather than day-to-day strength. The current Specification requires coring each day that shotcrete is placed. Jeff described some of the challenges associated with making, transporting, and testing the cores.

Alan suggested that we have done enough testing in the past and we have adequate historical data that frequent (daily) testing may not be warranted. Mo pointed out that concrete strength is heavily dependent on temperature, and we would require maturity meters to help verify adequate strength in the as-placed shotcrete.

Mark Etheridge suggested allowing the Contractors to handle the testing, and allowing 12” by 12” panels. WSDOT agreed to evaluate this suggestion.

Action Plan:

- Mo to provide update at next meeting on decision to allow Contractor testing
- Geoff to determine if shotcrete and CIP fascia act compositely in the finished wall.

4. Alternate Shotcrete Lagging

Mo asked the ADSC members for feedback about whether there would be an application for replacing timber lagging with shotcrete lagging in soldier pile walls. Jeff Grieder has used shotcrete in the past to replace precast panels that were required between the piles. After some discussion, the consensus was that there would be no practical reason to replace timber lagging with shotcrete. There is no savings with making this change.

As a related topic, several ADSC Members expressed interest in using shotcrete as the finished surface for soil nail walls. WSDOT typically requires an initial lift of shotcrete followed by a cast-in-place fascia. If shotcrete is used as the finished surface, the State would recognize a significant cost savings.

The main reason the State uses a CIP fascia is for aesthetic reasons. Discussion followed about some of the interesting and aesthetically pleasing finishes that can be provided using shotcrete. Mark Etheridge volunteered to bring in some photos showing shotcrete as a finished surface. It was agreed that Alan Macnab would coordinate the effort to provide photos to WSDOT.

Action Plan:

- Alan to coordinate getting architectural shotcrete photos to WSDOT.

5. Temporary Casing Payment

This topic was brought up because there was a concern of inequality between conventional and oscillator drilling for temporary casing payment. After review and discussion, payment is fair for both drilling methods. The Team agreed that the Specification is fine as-is.

Action Plan:

- No action needed.

6. Use of Colloidal Mixers

Mo requested feedback from the ADSC Members on the use of colloidal mixers for mixing grout. Most Members had both colloidal and paddle mixers. The larger mixers are typically colloidal, while the smaller mixers are often paddle type. Mo expressed concern that we are seeing segregation when paddle mixers are used. WSDOT is investigating the issue at this point, and will disuses further with ADSC if we see a need to change the Specifications.

Action Plan:

- No action needed.

7. Pressure Gage Graduation

This concern comes up when the Contractors are testing 20-30 kip nails with a 200-300 ton ram. This Specification states that the pressure gage should be within middle 1/3 of the gauge. However, the graduations on the gauge are often such that it is difficult to tell exactly what force is in the nail. Mark Etheridge agreed to send gauge data to Jim Cuthbertson. At the next meeting, the Team will review this and attempt to develop some revised Specification language.

Action Plan:

- Mo to keep on agenda for next meeting.

8. Fiberglass PGAs

Mo handed out information about an out-of-state project that had apparently used fiberglass PGA's and saved about \$250 per tendon. Mo asked if this was something that warranted further research.

Several ADSC Members have experience using fiberglass PGA's. While they perform well in tension, they don't provide adequate shear capacity. The ADSC Members agreed that there is no cost savings with using fiberglass PGA's. One ADSC Member pointed out that fiberglass nails are often a good choice if subterranean easements are an issue.

Action Plan:

- No action needed.

9. Workshop Planning Committee Report

Alan handed out the agenda for the upcoming training. This was reviewed and agreed to by the Team. A dry run will be conducted on March 9th at DBM. Mo will be out of town for the dry run.

Action Plan:

- Alan to coordinate dry run at DBM.

13. Future Meeting Date

The next meeting will be held on March 20. The Joint Training Workshop will be held in Bothell on March 23. Meeting dates beyond this are as follows.

- May 4th.
- June 22nd.
- August 10th.